

I claim:

1. A method of manufacturing a plurality of encapsulated interconnected vials with a mold having a first member having attached thereto a plurality of core pins and a second member containing a first slide and a second slide, and wherein said first slide and said second slide have an extended position and a contracted position, and wherein the method comprises:

-contracting said first slide and said second slide so that a plurality of cavity profiles linked together by a plurality of arms are formed;

-inserting the plurality of core pins on said first member into said plurality of cavity profiles so that said plurality of core pins are free standing;

-injecting a plastic fluid about said plurality of core pins to form a plurality of interconnected vials;

-ejecting the plurality of interconnected vials from the plurality of core pins;

-positioning the plurality of interconnected vials into a holder tray;

-placing a liquid into the plurality of interconnected vials;

-heat sealing the open end of the plurality of interconnected vials in order to encapsulate said plurality of interconnected vials.

2. The method of claim 1 wherein the step of heat sealing includes:

-clamping the plurality of interconnected vials into a heat sealing device, and wherein the heat sealing device contains a first arm and a second arm;

-lowering the first arm into engagement with the second arm;

- applying heat to the first arm;
- measuring the temperature of the first arm;
- measuring the time heat is applied to said first arm.

5 3. The method of claim 2 further comprising:

- terminating the heat applied to said first arm after a predetermined time;
- unclasping the first arm from the second arm;
- removing the plurality of interconnected vials from said holder.

10 4. The method of claim 3 wherein the liquid comprises a medicine and wherein the step of placing the liquid into the plurality of interconnected vials includes measuring a predetermined amount of medicine and injecting the predetermined amount of the medicine into the plurality of interconnected vials.

15 5. The method of claim 2 wherein the step of heat sealing includes:

-clamping the plurality of interconnected vials into a heat sealing device, and wherein the heat sealing device contains a first arm and a second arm;

-lowering the first arm into engagement with the second arm;

-applying heat to the first arm;

20 -measuring the temperature of the first arm;

-setting a predetermined maximum temperature;

-exceeding the predetermined maximum temperature;

-terminating the heat applied after exceeding the predetermined maximum temperature.

5 6. A method of molding a plurality of interconnected vials with a mold, said mold comprising a first member having a first end and a second end, including an opening defined within said first end; a manifold member operatively attached to said second end of said first member for channeling a plastic fluid to an insert means, said insert means being positioned within the opening located within said first member, said insert means containing a first slide and a second slide, with said first slide and said second slide having an extended position and a
10 contracted position; a second member having a first end and a second end, and wherein said first end of said second member has attached thereto a plurality of core pins contained therein; the method comprising:

-heating a plastic so that the plastic is fluidized;

-channeling the plastic fluid into the manifold;

15 -injecting the plastic fluid into the manifold;

-moving said piston so that said first end of said second member contacts said first slide and said second slide;

-injecting the plastic fluid through said first member;

20 -contracting said first slide and said second slide so that said first end of said second member abuts the first end of said first member;

-forming a plurality of cavity profiles within said contracted first slide and said second slide and wherein said plurality of cavity profiles are in communication forming a plurality

of arm contours;

-placing said plurality of core pins into said plurality of cavity profiles so that said plurality of core pins are free standing within said plurality of cavity profiles;

-injecting the plastic fluid into said plurality of cavity profiles and into said plurality of arm contours interconnected together via a plurality of arms;

-allowing the first slide and second slide to expand;

-ejecting the plurality of interconnected vials from the plurality of core pins;

-placing the plurality of interconnected vials into a vial holder tray.

7. The method of claim 6 wherein the plurality of interconnected vials comprises a first end that is closed and a second end that is opened and wherein the method further comprises:

-placing a medicine within said open end of said plurality of interconnected vials.

8. The method of claim 7 further comprising:

-placing the open end of said plurality of interconnected vials within a heat sealer device, said heat sealer device comprising a first arm and a second arm;

-clamping said plurality of interconnected vials within said first arm and second arm;

-applying heat to said first arm;

-measuring the amount of heat applied to said first arm;

-measuring the time the heat is applied to said first arm;

-terminating the heat after a predetermined amount of time has expired.

9. The method of claim 8 further comprising:

- unclasping said first arm from said second arm;
- removing said plurality of interconnected vials from the vial holder tray;
- separating said plurality of interconnected vials.

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10. The method of claim 9 wherein the medicine is a liquid and the step of placing the liquid into the plurality of interconnected vials includes measuring a predetermined amount of liquid and injecting the liquid into the open end of the plurality of interconnected vials.

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11. The method of claim 10 wherein said first member further comprises a plurality of cast heaters operatively associated with said first slide and said second slide, and wherein the step of maintaining the plastic fluid at a constant temperature comprises:

- heating the plastic fluid with said cast heaters;
- and wherein the step of channeling the plastic fluid through said first member and

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into said insert means includes flowing the plastic fluid through said cast heater so that the plastic fluid is maintained at a constant temperature.

12. The method of claim 11 wherein the step of channeling the water stream through said mold comprises:

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- introducing a first water stream into said first slide;
- introducing the first water stream into said second slide;
- circulating the first water stream within said first slide and said second slide;

-exiting the first water stream from said first slide and said second slide.

13. The method of claim 12 wherein the step of channeling the water stream through said mold further comprises:

- 5 -introducing a second water stream into said plurality of core pins;
- circulating the second water stream within said plurality of core pins;
- exiting the second water stream from said plurality of core pins.

14. The method of claim 13 wherein the step of maintaining the plastic fluid within said manifold at a constant temperature further comprises :

- 10 -measuring the temperature of said plastic fluid within said manifold;
- adjusting the temperature of said heater in order to maintain the plastic fluidity.

15. The method of claim 14 wherein the plastic fluid is a metallocene resin.

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16. A method of producing a plurality of interconnected vials in a mold, the mold comprising a first member having a first end and a second end, including an opening defined within said first end; a manifold member operatively attached to said second end of said first member for channeling a plastic fluid to a first slide and a second slide positioned within the opening, with said first slide and said second slide having an extended position and a contracted position; a second member having a first end and a second end, and wherein said first end of said second member contains a plurality of core pins contained therein; an ejector plate selectively

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attachable to said second member, said plurality of core pins being disposed therethrough; and, a piston adapted to said second end of said second member for reciprocating said second member into engagement with said first slide and said second slide, the method comprising:

-heating a plastic so that a plastic fluid is formed;

5 -injecting the plastic fluid through said first member and into said first slide and said second slide;

-moving said piston so that said second member contacts said first slide and said second slide;

10 -contracting said first slide and said second slide so that said contracted first slide and said second slide form a plurality of cavity profiles and wherein said plurality of cavities are linked together by a plurality of arms, said cavity profiles having a first end and a second end, with the first end containing a wing tip contour, and the second end being opened;

-placing said plurality of core pins into said plurality of cavity profiles and wherein said plurality of core pins are in a free standing arrangement within said cavity profiles;

15 -injecting the plastic fluid into said cavity profiles;

-injecting the plastic fluid about said plurality of core pins so that the plasticize fluid is disposed about said core pin so that the plurality of interconnected vials are formed;

-reciprocating the piston away from the first end of said first member;

-allowing the first slide and second slide to expand;

20 -reciprocating the piston so that the ejector plate axially traverses the plurality of core pins;

-ejecting the plurality of interconnected vials from the plurality of core pins, and

wherein the plurality of interconnected vials comprises a first end that is closed and a second end that is opened;

- placing said plurality of interconnected vials within a holder tray;
- placing a flowable compound within said plurality of interconnected vials.

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17. The method of claim 16 further comprising:

- placing the open end of said plurality of interconnected vials within a heat sealer device, said heat sealer device comprising a first arm and a second arm;
- clamping said plurality of interconnected vials within said first arm and second arm;
- applying heat to said first arm;
- measuring the amount of heat applied;
- measuring the time the heat is applied;
- terminating the heat after a predetermined amount of time has expired.

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18. The method of claim 17 further comprising:

- unclaspingsaid first arm from said second arm;
- removing said plurality of interconnected vials from the vial holder tray;
- separating said plurality of interconnected vials.

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19. The method of claim 18 wherein the medicine is a liquid and the step of placing the liquid into the plurality of interconnected vials includes measuring a predetermined amount of liquid and injecting the liquid into the open end of the plurality of interconnected vials.